

OTIF



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Subject: Adaptation of RID Chapter 6.8 following implementation of the TSIs for Freight
Wagons

**Proposal transmitted by the United Kingdom and comments on documents
OTIF/RID/CE/2007/13 (Belgium) and OTIF/RID/CE/2007/19 (UIP)**

Introduction

In document OTIF/RID/CE/2007/13, Belgium proposes to include the requirement from paragraph 1.2 of UIC leaflet 573 – Tank wagons for the carriage of dangerous goods must have a minimum distance of 300 mm between the headstock plane and the most protruding point at tank extremity.

In document OTIF/RID/CE/2007/19, the International Union of Private Wagons (UIP) proposes that if the proposal from Belgium is adopted, suitable transitional measures must be considered. The United Kingdom supports this UIP position but in addition proposes an alternative to the distance requirement.

Justification

For tank wagons built or registered in Great Britain and intended for use in international traffic, the requirement in paragraph 1.2 of UIC leaflet 573 is met.

However, because of the smaller (more restrictive) loading gauge in Great Britain (GB) compared with Continental Europe, tank wagons used in national traffic have to be built with longer and smaller diameter tanks than in the rest of Europe (to obtain a meaningful payload for most traffic). This means typically that the tanks ends are less than 300 mm from the headstocks but alternative buffer override protection has to be fitted.

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By tonnage or volume, the great majority of dangerous goods still carried by rail are petroleum liquids in tank wagons. If the proposal from Belgium were to be adopted, this would have very serious consequences for the carriage of dangerous goods by rail in Great Britain.

To illustrate the problem, the latest design of GB domestic tank wagon for petrol has 102 m³ of volumetric capacity (and 101.6 tonnes gross laden weight – the maximum axle loading in GB is 25.4 tonnes) with the centre of the tank end projecting beyond the end of the headstock by about 110 mm at each end of the wagon. To comply with the Belgian proposal, the tank would have to be shortened by 410 mm at each end of the wagon. This would reduce the volumetric capacity by about 7 m³ which would mean 5 tonnes less petrol carried by each wagon on each trip. This would therefore mean for just one rail customer on one of his routes, a reduction of 75,000 tonnes per year carried for the same number of journeys compared with what can be moved today. The cost implication of this would be of the order of 420,000 euros per year and overall have a serious impact on the cost effectiveness of rail transport in GB. Also it would mean significantly higher tonne kilometres/wagon kilometres travelled with attendant higher risks involved.

If the proposal from Belgium is to be adopted, the United Kingdom proposes that an alternative measure of providing buffer override protection instead be included in RID.

Since 1980 there has been a requirement in GB that if the 300 mm clearance from the headstock is not met for tank wagons for dangerous goods, then end protection in the form of buffer override shall be fitted. This requirement is currently contained in a mandatory Railway Group Standard and is reproduced in Annex 1. This type of buffer override has proved very effective in preventing buffers damaging the tanks in derailment situations. The rail dangerous goods incident data base in GB has been interrogated and there have been no reported incidents of tank ends having been ruptured where this buffer override has been fitted.

Of course more recently extra requirements have been introduced for high hazards substances in the form of energy absorption at the ends of tank wagons (TE22) and protection of shells of tank wagons against overriding of buffers and derailment or to limit damage when buffers override (TE25). These requirements apply equally to tank wagons used for national traffic in GB.

Proposal

If the proposal from Belgium in OTIF/RID/CE/2007/13 were to be adopted:

1. Transitional measures as proposed by the UIP in OTIF/RID/CE/2007/19 should be introduced in 1.6.3 of RID.
2. The proposal in OTIF/RID/CE/2007/13 should be modified to provide for the alternative of buffer override protection.

Insert a new second paragraph in 6.8.2.1.29 as follows:

“Alternatively, end protection shall be provided in the form of buffer overriders of a design acceptable to the competent authority.”

3. As TE25 already requires more stringent buffer override protection, amend the first proposal for a new 6.8.2.1.29 in OTIF/RID/CE/2007/13 by modifying the end of the new first paragraph as follows:

“Tank wagons shall have a minimum distance of 300 mm between the headstock plane and the most protruding point of the tank extremity end, except where the requirements of special provision TE25 of 6.8.4 (b) are met.”

ANNEX 1

Extract from Railway Group Standard GM/RT2101

“Requirements for the Design, Construction, Test and Use of the Tanks of Rail Tank Wagons”

“Tank wagons designed to carry dangerous goods shall be provided with the following additional protection:

Where a clearance of at least 920 mm* from the uncompressed buffer face to the end of the tank does not exist, tank wagons shall be provided with additional protection.

This end protection should, as a minimum, comprise the arrangement detailed below:

A steel plate or channel section mounted on top of the headstock to extend its outer vertical face by at least 300 mm upwards. The plate should be braced by intermediate gussets having a minimum base length of approximately 300 mm. The thickness of the faceplate should not be less than 5 mm and its top edge should be reinforced by a rearward facing flange of at least 75 mm.”

*Note: This distance of 920 mm, also illustrated in UIC leaflet 573, comes from the 300 mm between the end of the tank and the headstock and 620 mm for the length of an uncompressed UIC buffer.
